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10/604,684	08/10/2003	Ming-Hsun Hsu	VIAP0073USA	1683
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NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			EXAMINER NGUYEN, TOAN D	
			ART UNIT 2616	PAPER NUMBER
			NOTIFICATION DATE 05/09/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/604,684

Applicant(s)

HSU ET AL.

Examiner

Toan D. Nguyen

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lippett et al. (US 6,667,993) in view of Basil et al. (US 2002/0138850).

For claims 1-3, and 7, Lippett et al. disclose communication channel, comprising:  
a first scrambler (figure 4, reference 420, col. 6 lines 56-57);  
a second scrambler (figure 5, reference 400(1), col. 5 lines 3-5); and  
two transmission ports for transmitting the first and the second transmission signals to the corresponding network nodes (Table 3, col. 5 lines 57-60 for each transmitter which included scrambler means).

However, Lippett et al. do not expressly disclose generating a first transmission signal by executing a logic operation with a first signal and a first scrambling code; and for generating a second transmission signal by executing the logical operation with a second signal and a second scrambling code, wherein the first scrambling code and the second scrambling code are different such that the first transmission signal and the second transmission signal are unlike. In an analogous art, Basil et al. disclose generating a first transmission signal by executing a logic operation with a first signal and a first scrambling code (page 4 paragraph [0043], and page 5 paragraph [0051]); and for generating a second transmission signal by executing the logical operation with a second signal and a second scrambling code, wherein the first scrambling code and the second scrambling code are different such that the first transmission signal and the second transmission signal are unlike (page 5, paragraph [0052]).

Basil et al. disclose wherein the first scrambler comprises a first random number generator for executing a second logic operation with a first seed to generate the first scrambling code, and the second scrambler comprises a second random number generator for executing the second logic operation with a second seed to generate the second scrambling code; wherein the first seed and the second seed are different so that the first scrambling code and the second scrambling code are unlike (page 5, paragraph [0052] as set forth in claim 2), capable of updating the value of the first seed after a predetermined period after the first scrambler generates the first transmission signal, and capable of updating the value of the second seed after the predetermined period after the second scrambler generates the second transmission signal (page 4,

paragraph [0043] as set forth in claim 3), and the logical operation is exclusive OR (page 4 paragraph [0043] as set forth in claim 7).

One skilled in the art would have recognized the generating a first transmission signal by executing a logic operation with a first signal and a first scrambling code, and would have applied Basil et al.'s scrambling seeds in Lippett et al.'s scrambler.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Basil et al.'s data scrambling system for a shared transmission media in Lippett et al.'s communication channel with the motivation being achieved by using a different way to calculate the seed based on the target client modem MAC ID (page 5, paragraph [0052]).

For claim 4, Lippett et al. disclose in which the first scrambler generates the first transmission signal after receiving a first reset signal, and the second scrambler generates the second transmission signal after receiving a second reset signal, wherein the first reset signal and the second reset signal are transmitted to the first scrambler and the second scrambler respectively at different times so that the first scrambler and the second scrambler start to generate the first transmission signal and the second transmission signal respectively at different times (Table 2, reference RESET, col. 7 lines 43-44).

For claim 5, Lippett et al. disclose capable of setting an initial value to the first seed when the first scrambler receives the first reset signal and another initial value to the second seed when the second scrambler receives the second reset signal (Table 2, reference RESET, col. 7 lines 43-44).

For claim 6, Lippett et al. disclose further comprising a first encoder and a second encoder for encoding the first transmission signal and the second transmission signal respectively in the same way, the encoded first transmission signal and the encoded second transmission signal being transmitted to the corresponding network nodes through the two transmission ports, wherein the first encoder and the second encoder encode a signal composed of 0 and 1 values to one composed of 0, 1, and 1 values (col. 6 lines 4-20).

For claims 8 and 10, Lippett et al. disclose communication channel, comprising:  
a reset circuit for generating a first reset signal and a second reset signal (Table 2, reference RESET, col. 5 lines 9-11);

a first signal circuit comprising at least a first scrambler (figure 4, reference 420, col. 6 lines 56-57);

a second signal circuit comprising at least a second scrambler (figure 5, reference 400(1), col. 5 lines 3-5); and

two transmission ports for transmitting the first and the second transmission signals to the corresponding network nodes (Table 3, col. 5 lines 57-60 for each transmitter which included scrambler means).

However, Lippett et al. do not expressly disclose generating a first transmission signal by utilizing the first scrambler to execute a logical operation with a first signal and a first scrambling code when receiving a first reset signal; and generating a second transmission signal by utilizing the second scrambler to execute the logical operation with a second signal and a second scrambling code when receiving a second reset

signal. In an analogous art, Basil et al. disclose generating a first transmission signal by utilizing the first scrambler to execute a logical operation with a first signal and a first scrambling code when receiving a first reset signal (page 4, paragraph [0043, and page 5 paragraph [0051]); and generating a second transmission signal by utilizing the second scrambler to execute the logical operation with a second signal and a second scrambling code when receiving a second reset signal (page 5, paragraph [0052]).

Basil et al. disclose the first scrambler and the second scrambler are different so the first transmission signal and the second transmission signal are different even when the first signal is equal to the second signal (page 5, paragraph [0052] as set forth in claim 10).

One skilled in the art would have recognized the generating a first transmission signal by utilizing the first scrambler to execute a logical operation with a first signal and a first scrambling code when receiving a first reset signal, and would have applied Basil et al.'s scrambling seeds in Lippett et al.'s scrambler. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Basil et al.'s data scrambling system for a shared transmission media in Lippett et al.'s communication channel with the motivation being achieved by using a different way to calculate the seed based on the target client modem MAC ID (page 5, paragraph [0052]).

For claim 9, Lippett et al. disclose in which the reset circuits generate the first reset signal and the second reset signal at different times so that the time of the first signal circuit to generate the first transmission signal and the time of the second signal

circuit to generate the second transmission signal are not the same (col. 7 lines 43-44 for each scrambler 420 means).

For claims 11-13, and 17, Lippett et al. disclose communication channel, comprising:

transmitting the first transmission signal and the second transmission signal to the corresponding nodes of the network respectively (Table 3, col. 5 lines 57-60 for each transmitter which included scrambler means).

However, Lippett et al. do not expressly disclose:

executing a logical operation with a first signal and a first scrambling code, and executing the logical operation with a second signal and a second scrambling code, wherein the second scrambling code is different with the first scrambling code so the first transmission signal and the second transmission signals are different even when the first signal is equal to the second signal.

In an analogous art, Basil et al. disclose executing a logical operation with a first signal and a first scrambling code (page 4, paragraph [0043], and page 5 paragraph [0051]), and executing the logical operation with a second signal and a second scrambling code, wherein the second scrambling code is different with the first scrambling code so the first transmission signal and the second transmission signals are different even when the first signal is equal to the second signal (page 5, paragraph [0052]).

Basil et al. disclose the first scrambling code is generated by executing a second logical operation with a first seed and the second scrambling code is generated by



Art Unit: 2616

executing the second logical operation with a second seed, wherein the first seed and the second seed are different so that the first scrambling code and the second scrambling code are unlike (page 5, paragraph [0052] as set forth in claim 12), in which the value of the first seed is updated after a predetermined period after the first transmission signal is generated, and the value of the second seed is updated after the predetermined period after the second transmission signal is generated (page 4, paragraph [0043] as set forth in claim 13), and the logical operation is exclusive OR (page 4 paragraph [0043] as set forth in claim 17).

One skilled in the art would have recognized the generating a first transmission signal by executing a logic operation with a first signal and a first scrambling code, and would have applied Basil et al.'s scrambling seeds in Lippett et al.'s scrambler.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Basil et al.'s data scrambling system for a shared transmission media in Lippett et al.'s communication channel with the motivation being achieved by using a different way to calculate the seed based on the target client modem MAC ID (page 5, paragraph [0052]).

For claim 14, Lippett et al. disclose in which the first transmission signal is generated after receiving a first reset signal, and the second transmission signal is generated after receiving a second reset signal, wherein the first reset signal and second reset signal turn on the process of generating the first scrambling code and the process of generating the second scrambling code at different times, so that first

Art Unit: 2616

transmission signal and the second transmission signal are generated at different times (Table 2, reference RESET, col. 7 lines 43-44).

For claim 15, Lippett et al. disclose in which the first seed is set to an initial value when the first reset signal is received, and the second seed is set to another initial value when the second reset signal is received (Table 2, reference RESET, col. 7 lines 43-44).

For claim 16, Lippett et al. disclose capable of encoding the first transmission signal and the second transmission signal respectively in the same way, the encoded first transmission signal and the encoded second transmission signal being transmitted to the corresponding network nodes through the two transmission ports, the way of encoding is to encode a digital signal composed of 0 and 1 values to one composed of 0, 1, and 1 values (col. 6 lines 4-20).

For claims 18 and 20, Lippett et al. disclose communication channel, comprising: receiving a first reset signal and a second reset signal (Table 2, reference RESET, col. 5 lines 9-11); and

transmitting the first transmission signal and the second transmission signal to the corresponding nodes in the network respectively (Table 3, col. 5 lines 57-60 for each transmitter which included scrambler means).

However, Lippett et al. do not expressly disclose executing a logical operation with a first signal and a first scrambling code to generate a first transmission signal right after receiving the first reset signal, and executing the logical operation with a second signal and a second scrambling code to generate a second transmission signal right

Art Unit: 2616

after receiving the second reset signal, wherein the second transmission signal are different from the first transmission signal. In an analogous art, Basil et al. disclose executing a logical operation with a first signal and a first scrambling code to generate a first transmission signal right after receiving the first reset signal (page 4, paragraph [0043, and page 5 paragraph [0051]), and executing the logical operation with a second signal and a second scrambling code to generate a second transmission signal right after receiving the second reset signal, wherein the second transmission signal are different from the first transmission signal (page 5, paragraph [0052]).

Basil et al. disclose in which the first scrambling code and the second scrambling code are different so that the first transmission signal are not equal to the second transmission signal even when the first signal and the second signal are the same (page 5, paragraph [0052] as set forth in claim 20).

One skilled in the art would have recognized the executing a logical operation with a first signal and a first scrambling code to generate a first transmission signal right after receiving the first reset signal, and would have applied Basil et al.'s scrambling seeds in Lippett et al.'s scrambler. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Basil et al.'s data scrambling system for a shared transmission media in Lippett et al.'s communication channel with the motivation being achieved by using a different way to calculate the seed based on the target client modem MAC ID (page 5, paragraph [0052]).

For claim 19, Lippett et al. disclose generating the first reset signal and the second reset signal at different times respectively so that the times to generate the first

Art Unit: 2616

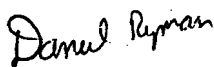
transmission signal and the second transmission signal are different (col. 7 lines 43-44 for each scrambler 420 means).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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